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| **Fire Prevention Plan** |  |
| AO Recycling Limited  Stafford Park Plastics Recycling Facility Stafford Park 11 Telford, Shropshire TF3 3AY |  |

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# Version Control

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Version No | Author | Description of Change | Authorised by: |
| April 2019 | V2 | MP | FPP prepared for AO Recycling Limited | AS |
| 15/08/2023 | V3.1 | MP | FPP review and update. POPs added section 1.7.2 & amended 3.5.3 | GD |
| 14/08/2024 | V4.1 | MP | FPP review and update. | AS |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Next Review: 14/08/2029 | | | | |

# Introduction

## 1.1 Purpose

The purpose of this document is to identify potential fire hazards, detail the controls implemented to prevent fires and the actions taken to reduce the impacts should there be a fire on site.

This plan has been prepared to conjunction with the format prescribed by the Environment Agency and detailed in:

<https://www.gov.uk/government/publications/fire-prevention-plans-environmental-permits/fire-prevention-plans-environmental-permits#managing-fire-water>

The main objective of this fire prevention plan is to

• minimise the likelihood of a fire happening

• aim for a fire to be extinguished within 4 hours

• Minimise the spread of fire within the site and to neighbouring sites.

## 1.2 Site Location

### 1.2.1 Surrounding Land Use

The Site address is Stafford Park Plastics Recycling Facility, Stafford Park 11 Road, Telford, TF3 3AY and is located 2km to the east of the centre of Telford at grid reference SJ 71934 08549. The Site is accessed from the A464 which runs east to west, via Stafford Park 11 Road.

The Site is located within a commercial estate and is adjacent (south) of the M54 motorway. The Site also lies adjacent (north) of the main railway line connecting to Telford Central. The Site is circa 1.47 hectares in area and roughly rectangular in shape. The immediate land uses are shown in Table 1-1 below.

**Table 1-1**

**Land Uses surrounding the Site**

|  |  |
| --- | --- |
| North | Commercial properties |
| East | Stafford Park 11 (road), commercial properties beyond. |
| South | Main railway line, commercial properties beyond. |
| West | Commercial properties |

The immediate surrounding land uses are described in further detail in Tables 1.2 – 1.4:

**Table 1-2**

**Land Uses surrounding the Site - detailed**

|  |  |
| --- | --- |
| Commercial and Industrial Premises | The Stafford Park industrial/commercial area surrounds the Site’s boundary in all directions. The closest premises are located adjacent to the Site’s northern boundary. |
| Residential Properties | The nearest residential properties are located in Shifnal, approximately 510m to the southeast of the site. Beyond this, properties in Telford lie 770m from the site at their closest point. |
| Local Transport Network | The Site is bordered by Stafford Park 11 to the west. A railway line that serves Telford Central railway station is located adjacent to the Site’s southern boundary. |
| Recreational Facilities | The nearest recreational facility to the site is a sports court at 780m west. A second sports court is located 920m northwest. Beyond these, Telford Sailing Club is located 800m north. |
| Allotment Gardens | There are no allotment gardens within 1000m of the Site’s boundary |
| Surface Water Features | Several surface water drains can be found within 1000m of the Site’s boundary. The closest of these being an open drain lying approximately 310m to the south of the Site. The nearest pond lies 310m southeast. Priorslee lake is located approximately 790m north of the site boundary. |
| Areas of Open Ground | There are several areas of open ground within the predominantly industrial/commercial area surrounding the Site. The closest area is located approximately 110m to the eastern boundary of the Site. |
| Educational | The University of Wolverhampton is located 830m northwest of the permit boundary. |

## 1.3 Ecology

**Table 1-3**

**Ecology (The MAGIC website has been assessed to determine the ecological Site setting).**

|  |  |
| --- | --- |
| Sites of Special Scientific Interest | There are no Sites of special Scientific Interest (SSSI’s) within 1km of the Site’s boundary. |
| Local Nature Reserve | There are no Local Nature reserves within 1km of the Site’s boundary. |
| Ancient Woodland | There is one area of ancient woodland within 1km of the Site’s boundary, this is known as Knowl Wood. This lies approximately 970m to the Site’s eastern boundary.  The searches confirmed that there are none of the following within the 1km:   * Ramsar’s; * Special Protection Area’s (SPA). * Areas of Natural Beauty; * National Nature Reserves; and * National Parks. |

## 1.4 Cultural and Heritage

**Table 1-4**

**Cultural and Heritage (The MAGIC website has been assessed to determine the Site setting).**

|  |  |
| --- | --- |
| Listed Building | The review of MAGIC revealed that there are no listed buildings within 1km of the Site’s boundary as illustrated on [Drawing 03.](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E003%2E0a%5FENV%5FSITE%5FSETTING%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings) |
| Scheduled Monument | There are no Scheduled Monuments within 1km of the Site’s boundary. The search on MAGIC confirmed that the following features do not lie within 1km of the Site:   * World Heritage Sites; * Registered Battlefields; and * Registered Park and Garden. |

## 1.5 Identified Receptors

Table 1-5 and [Drawing 03](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E003%2E0a%5FENV%5FSITE%5FSETTING%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings) identify the receptors which are considered to be potentially sensitive and could reasonably be affected by activities at the Site.

**Table 1-5**

**Identified Receptors**

|  |  |  |  |
| --- | --- | --- | --- |
| Receptor Name | Receptor Type | Direction from Site | Approximate Distance from Site Boundary at closest point (in metres) |
| Local receptors located within 1000m of the EP boundary as shown on Drawing 003 | | | |
| Stafford Park  Commercial/Industrial Area | Commercial/Industrial | North, East, South and West | Adjacent |
| Stafford Park 11 | Local Transport Network | East | Adjacent |
| Railway Line | Local Transport Network | South | Adjacent |
| Roads | Local Transport Network | **North, East,** South and West | Adjacent |
| Open Ground | Open Ground | East | 110 |
| Agricultural Land | Agricultural | East, South | 300 |
| Surface Water Drain | Surface Water Feature | South | 310 |
| Shifnal Properties | Residential | Southeast | 510 |
| Telford Properties | Residential | West | 770 |
| Sports Court | Recreational | West | 780 |
| Priorslee Lake | Surface Water | **North** | 790 |
| Telford Sailing Club | Recreational | **North** | 800 |
| University of Wolverhampton | Educational | Northwest | 830 |
| K M Commercial Repairs | Industrial & Commercial | South | 850 |
| Sports Court | Recreational | Northwest | 920 |
| Motorway Services | Commercial | **Northeast** | 940 |
| Ecology and Cultural and Natural Heritage identified within 1km of the EP boundary as shown on Drawing 003 | | | |
| Ancient Woodland | Ancient Woodland | **East** | 970 |

## 1.6 Windrose

Figure 1-1 shows the wind patterns in 2017 as identified by the Shawbury meteorological station. The most prominent wind directions are from the west and southwest. Winds from the north and east are relatively infrequent.

Receptors to the north and east of the site are most at risk from windblown smoke and thus have been stated in bold text within Table 1-5.

**Figure 1-1**

**Shawbury Meteorological Station, 2017**

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## 1.7 Site Type

AO Recycling Ltd is the recycling arm of a large white goods retailer. The company is based in Telford. The organizations main activities involve the recycling of Waste Electric and Electronic Equipment (WEEE) such as refrigerators, cookers, dishwashers etc. AO Recycling Ltd. has been trading since 2009 and is currently employing more than 250 people covering 3 sites, which includes the Plastics Recycling Facility (PRF) located at Stafford Park.

The PRF Site accepts up to 50,000 tonnes per annum (tpa) of mixed plastic waste originating from end-of-life refrigerators, WEEE, large domestic appliances and small domestic appliances. The waste is treated in a staged separation process. A maximum of 2592 tonnes of waste can be stored on Site at any one time.

The Site layout, including waste storage locations have been identified on [Drawing 002](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E002%2E1%5FSITE%5FLAYOUT%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings).

### 1.7.1 Operations

The PRF accepts mixed plastics from the shredding of end-of-life refrigerators, WEEE, large domestic appliances and small domestic appliances in the form of approximately 962 tonnes per week of Acrylonitrile butadiene styrene (ABS), Polystyrene (PS), Polypropylene (PP), PP filled, brominated and Polyvinyl Chloride (PVC) plastics.

### 1.7.2 Persistent Organic Pollutants

The mixed plastics that the Site accepts may contain Persistent Organic Pollutants (POPs). In addition, there may be some waste outputs that contain POPs.

Bays 6 - 9 are used to store these materials. Bays 6 - 9 has impermeable roofing to prevent the occurrence of run-off entering the drainage network. In addition, procedures are in place regarding handling and storage or materials, drainage protection, spill controls etc.

An overview of these procedures is documented in OP17-SP: Maintenance & control of drainage network.

## 1.8 Waste Types

The types of waste taken by the site are below in Table 1-6 below:

**Table 1-6**

**European Waste Catalogue Codes**

|  |  |
| --- | --- |
| EWC Code | Description |
| 16 | Wastes not otherwise specified in the list |
| 16 02 | wastes from electrical and electronic equipment |
| 16 02 15\* | hazardous components removed from discarded equipment - plastics from domestic and commercial appliances only |
| 16 02 16 | components removed from discarded equipment other than those mentioned in 16 02 15 – non-hazardous plastics from domestic appliances only |
| 19 | Wastes from waste management facilities, off-site wastewater treatment plants and the preparation of water intended for human consumption and water for industrial use |
| 19 02 | wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation) |
| 19 02 04\* | premixed wastes composed of at least one hazardous waste - plastics from domestic appliances only |
| 19 10 | wastes from shredding of metal-containing wastes |
| 19 10 06 | other fractions other than those mentioned in 19 10 05 - non-hazardous plastics resulting from treatment of domestic appliances only |
| 19 12 | wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified |
| 19 12 04 | plastic and rubber - non-hazardous plastics resulting from treatment of domestic appliances only |
| 19 12 11\* | other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances - plastics from domestic appliances only |
| 19 12 12 | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11- non-hazardous plastics resulting from treatment of domestic appliances only |

## 1.9 Site Access

The Site is accessed via the Stafford Park 11 road to the east of the Site which leads from the A464.

The closest Fire Station is Telford Central Fire Station to the northwest of the Site. Using Google directions and mapping1, the drive time is approximately 2 minutes, and it is approximately 0.6 miles between the Site and the Fire Station.

Stafford Park 11 has been designed to accommodate large haulage vehicles. As such, the Fire Service would be able to reach the Site without difficulty. Vehicle Movements, as illustrated in [Drawing SK-012](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F416%2E09242%2E00007%2E07%2ESK%2D012%2EP4%20Stafford%20Vehicle%20Tracking%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings), have been tracked as part of the bay layout design and show that the Site will have sufficient space for large vehicles to manoeuvre, whilst [Drawing 005](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E005%2E1%5FDETAILED%5FSITE%26FPP%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings) shows the location of the entrance, exit and through routes.

1 Google Maps, Accessed in April 2019

The Site is operational between 06:00 and 22:00 on weekdays, during which time at least one staff member will be present on Site. In the event of a fire, the Fire Service would be able to gain immediate access during these hours. The Site will not open on Saturday, Sunday or public holidays.

Outside of operational hours the security gate will be locked. A 24/7 emergency contact number will be provided on the site notice board to allow emergency services to contact company personnel at the nearby Halesfield Site. In the event of a fire outside of operational hours, the gates to the Site will be remotely opened and closed by the 24/7 weighbridge operatives at Halesfield, who will continuously monitor the Site via CCTV. Furthermore, in an emergency outside of operational hours, a response team from Halesfield will drive 7 minutes to the Stafford Park Site to aid with handling the emergency.

## 1.10 Integrated Management System (IMS)

AO Recycling is certified to ISO14001:2015, ISO9001:2015 & ISO45001:2018 Environmental, Quality and Health and Safety Management standards. The Stafford Park site has been incorporated into the scope of the standards and has been externally certified by third party certification body.

# 2.0 Fire Prevention Measures

The following measures are implemented on Site to minimise the causes of fires.

## 2.1 Fire Detection and Alarm System

There will be no storage of waste within the building. The external waste storage bays will be monitored by site operatives during operational hours and also benefit from 24/7 CCTV coverage which will be monitored by AO staff at their nearby Halesfield Site. This ensures that the storage areas can be adequately monitored outside of operational hours.

The building benefits from a MX5 addressable 2-loop fire detection system which covers the offices, both on the ground and first floor and main factory. The factory floor, which houses the processing plant and mobile plant, has automatic fire detection with XP95 beam detectors linked to the fire alarm panel. An external company monitors the fire alarm system and will automatically alarm the fire brigade if activated outside operational hours. The alarm company will also call selected personnel from a ‘cascade list’. In addition, the Site has an appropriate distribution of manually operated fire alarm call points at each fire exit. Site operatives will be trained in the detection of fires and therefore will provide an additional level of management for fire detection. In the event that a fire is noticed on the factory floor, staff will be trained to use the manually operated fire call points.

Once the detection system or call point is triggered, an alarm will sound across the Site. When the alarm is sounded, the Emergency Response Co-Ordinator will call the Fire Service.

Outside of operational hours, the Site will be continuously monitored using CCTV which will be monitored by dedicated staff at AO Recycling Limited’s Halesfield Site in addition to the automatic detection system outlined earlier. If a fire is identified, the staff at Halesfield will call the Fire Service. Alarms will be tested weekly, and the alarm system will be maintained and inspected at appropriate intervals.

## 2.2 Waste Acceptance and Rejection

The Site follows strict waste acceptance and rejection procedures ensuring that only wastes detailed in Table 1-6 are accepted and that no non-conforming waste is accepted on Site. The procedure adopted by all Site operatives is as follows.

### 2.2.1 Procurement

Recycled plastic waste from shredding of end-of-life refrigerators, WEEE, large domestic appliances and small domestic appliances will be accepted on site. The Senior Transport and Administration Manager will ensure that all deliveries are scheduled, and no unauthorised or unexpected deliveries will be allowed to offload their waste at Stafford Park.

### 2.2.2 Weighbridge

Waste will be weighed at the weighbridge, where the Weighbridge Operator will check consignment notes and issue weighbridge tickets.

### 2.2.3 Waste Types and Verification

Only waste detailed in Table 1-6 is accepted on Site. To ensure that only permitted waste is accepted on Site, and to verify that the deliveries originate from pre-accepted sites and contain correct material, the Weighbridge Operator will check the weighbridge tickets and Waste Transfer Notes presented to them by the driver, against their list of expected deliveries as basic characterisation. Furthermore, all deliveries will undergo visual checks upon their arrival to Site by trained Site Operatives.

### 2.2.4 Compliant Waste

If the waste is found to be compliant, the delivery driver will be instructed to deposit the load into the correct bay, under the supervision of the Site Management or designated member of staff. Incoming, unprocessed waste will be stored in Bays 6-9.

### 2.2.5 Non-Compliant Waste

If any non-compliant waste arrives on site, it will be refused, and the driver informed. Furthermore, the issue will be raised with company management and the producer sites. In the event that the waste has already been deposited in the bays, the driver will be asked to remove it. If the driver has left the site, the waste will be isolated and stored in the non-complaint waste quarantine area until its removal to a suitably licenced facility can be arranged.

## 2.3 Waste Production

In addition to storing accepted waste on site in Bays 6-9, Bays 1-5 will be dedicated to the storage of waste produced on site. Note: some waste streams are stored in Bays 6-9 as they are hazardous and may contain POPs. See for reference OP17-SP: Maintenance & control of drainage network.

## 2.4 Inspections and Amenity Monitoring

The Site will be manned between 06:00 and 22:00 on weekdays and Site operatives will be asked to remain vigilant at all times and look out for signs of fire. Staff are trained in how to identify fires and fire hazards on Site. Staff also receive training on the use and selection of fire extinguishers, Site evacuation and shut down procedures, fire safety and all relevant emergency procedures. All bays will be visually inspected throughout the day and all findings are to be logged in the Daily Site Log as a minimum.

A fire watch will be undertaken at the end of every shift. Where possible, mobile and static plant will be switched off at least 30 minutes before the last person leaves site and Site Management will ensure that an inspection of all waste storage areas is undertaken looking for any signs of fire. Outside of operational hours i.e. on weekends and evenings, the Site will be monitored remotely from the Halesfield Site using CCTV for signs of trespassing and fire, in addition to the automatic detection system. The Site will undergo regular cleaning using mobile plant and wash down hoses/jet wash to prevent a build-up of debris and dust on Site. The results of all daily and weekly monitoring will be recorded in the Site Diary, as well as any remedial actions.

## 2.5 Waste Storage

Storage of waste pre- and post- processing takes place on impermeable concrete surfacing within the following areas:

* External Bays 1-10; and
* External General Waste Skip (site generated from offices and site operatives).

Each of the storage areas on Site are discussed further below and should be read in conjunction with [Drawing 005](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E005%2E1%5FDETAILED%5FSITE%26FPP%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings).

### 2.5.1 Bay Wall Construction

The locations of the bays are illustrated on [Drawing 005](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E005%2E1%5FDETAILED%5FSITE%26FPP%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings).

The waste bays are segregated by 80cm thick concrete walls. The waste bay walls are constructed of RC40/50XF equivalent concrete, chosen for their integrity in external conditions where they may be subject to regular cleaning in cold temperatures. The bay walls are 4.8m high. Bagged waste will be stored to a maximum height of 3.8m, to leave sufficient freeboard in line with FPP guidance. Loose waste will also be stored to a maximum height of 3.8m.

The fire resistance rating of the concrete wall has been estimated using the *‘Standard Method for Determining Fire Resistance of Concrete and Masonry Construction Assemblies’* (American Concrete Institute, ACI Standard 216.1-97). Table 2-4 of the ACI Standard is reproduced (converted to SI units) as Table 2-1 below.

**Table 2-12**

**Fire Resistance of Singular Layer Concrete Walls, Floors and Roofs**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Concrete Aggregate Type | Minimum equivalent thickness for fire resistance rating (cm) | | | | |
| 1-hour | 1.5-hour | 2-hour | 3-hour | 4-hour |
| Siliceous | 8.9 | 10.9 | 12.7 | 15.7 | 17.8 |
| Carbonate | 8.1 | 10.2 | 11.7 | 14.5 | 16.8 |
| Semi-lightweight | 6.9 | 8.4 | 9.7 | 11.7 | 13.7 |
| Lightweight | 6.4 | 7.9 | 9.1 | 11.2 | 13.0 |

2 Table 2.1, page 4, Standard Method for Determining Fire Resistance of Concrete and Masonry Construction Assemblies, American Concrete Institute (converted from inches to cm).

The specific type of concrete used for the walls in the storage area is not known therefore, as a sensitivity test, consideration of the properties of all types has been given. As shown above, a fire resistance rating of 4 hours is achieved by a concrete wall with a thickness of 13 - 17.8cm. The concrete walls used in the bays will be 80cm thick, therefore providing a fire resistance rating of over 4 hours.

### 2.5.2 External Waste Storage Area

The waste storage area is comprised of 10 external bays and a general waste skip located to the south and west of the processing building in the main yard area. Processed material, be it plastic or waste material such as metal, timber and fines arising from the processing operation are bagged as part of the treatment and stored within bags in Bays 1-5. Unprocessed plastic will be stored in Bays 6-9 in loose or bagged form. All waste will be stored to a maximum of 3.8m.

The storage bays will be located on impermeable surfacing and benefit from bunding and kerbing to contain leaks and spillages. The bays have been designed to ensure that the storage volumes are compliant with FPP guidance. The waste storage arrangements are shown in Table 2-2 below. The volumes for loose plastic have been calculated assuming a 45ᵒ angle of repose at the front of the bay as illustrated in figure 2-1.

**Table 2-2**

**External Waste Storage Area: Waste Types, Storage Time and Dimensions**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Identifier | Waste Type | Max Storage Time (months) | Length (m) | Width (m) | Height (m) | Maximum volume when bagged (m3) | Maximum volume when loose (m3) |
| Bay 1 | Bagged Processed Plastic/ Processed Waste | 3 | 12 | 9 | 3.8 | 410.4 |  |
| Bay 2 | Bagged Processed Plastic/ Processed Waste | 3 | 12 | 9 | 3.8 | 410.4 |  |
| Bay 3 | Bagged Processed Plastic/ Processed Waste | 3 | 12 | 9 | 3.8 | 410.4 |  |
| Bay 4 | Bagged Processed Plastic/ Processed Waste | 3 | 12 | 9 | 3.8 | 410.4 |  |
| Bay 5 | Bagged Processed Plastic/ Processed Waste | 3 | 12 | 9 | 3.8 | 410.4 |  |
| Bay 6 | Loose/Bagged Unprocessed Plastic | 3 | 12 | 9 | 3.8 | 410.5 | 281.573 |
| Bay 7 | Loose/Bagged Unprocessed Plastic | 3 | 12 | 9 | 3.8 | 410.5 | 281.573 |
| Bay 8 | Loose/Bagged Unprocessed Plastic | 3 | 12 | 9 | 3.8 | 410.5 | 281.573 |

3 Assumes a 45° angle of repose

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Identifier | Waste Type | Max Storage Time (months) | Length (m) | Width (m) | Height (m) | Maximum volume when bagged (m3) | Maximum volume when loose (m3) |
| Bay 9 | Loose/Bagged Unprocessed Plastic | 3 | 12 | 9 | 3.8 | 410.5 | 281.573 |
| Bay 104 | Loose/Bagged Unprocessed Plastic | 3 | 12 | 9 | 3.8 | 400 | 220.153 |
| General Waste Skip | General Site Generated Waste | 14 days | 3.66 | 1.68 | 1.22 |  | 7.55 |

**Figure 2-1**

**Cross Section of Loose Plastic Storage**

A diagram of a blue rectangle with orange arrows

Description automatically generated

3 Assumes a 45° angle of repose

4 Bay 10 is an irregular shape as illustrated on Drawing 002 Site Layout. The dimensions given in the table represent the maximum dimensions of the shape, but the volume listed has been calculated taking into account the differing dimensions of the bay to provide an accurate storage volume.

5 Assumes the volume of an 8-yard skip.

### 2.5.3 Non-Waste Materials

The Site stores non-waste materials that are not covered by the FPP Guidance but are considered in this FPP due to the potential for them to cause or increase the impact of a fire on the Site. The materials and their proposed storage arrangements are shown in Table 2-3 below and illustrated on [Drawing 005](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E005%2E1%5FDETAILED%5FSITE%26FPP%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings).

**Table 2-3**

**Non-Waste Materials: Storage Arrangements, Capacity and Amount Per Year**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of raw material | Storage arrangements (tanks, intermediate bulk containers (IBC), silos etc.) | Storage Location | Storage capacity (tonnes) | Amount used (tonnes per year) |
| Calcium Carbonate | Flexible Intermediate Bulk Container (FIBC) | Within processing building | 150 | 72 |
| Diesel | 2500 Litre Commercial Bunded Fuel Tank | Outside processing building | 2.5 | 30 |

## 2.6 Management of Hotspots

Waste will be stored for a maximum of 3 months on Site and as such the occurrence of hotspots is unlikely. Nonetheless, to minimise the occurrence of hotspots waste will be routinely turned. Wastes will not be driven over by on Site plant to avoid compaction, which may contribute to a build-up of heat within the pile.

Additionally, AO operates a first-in first out procedure to ensure that waste that has been stored the longest is removed first. Stockpiles will be rotated with every new waste deposit and when the waste is transferred to onsite plant for treatment. Prior to the deposit of newly processed waste within any stockpile, the existing stockpiled waste will be moved forwards (and therefore turned) to allow the new waste to be deposited at the back of the bay.

Suitably qualified Site personnel will carry out daily checks of the Site to identify the risks and inspect the stockpiles. This ensures that the Site does not reach a level of overcapacity in respect to storage.

All bays will be managed as follows to minimise self-combustion:

* Storage times will be minimised;
* Risk factors (e.g. mixing of materials and heat generated during treatment) will be reduced;
* Bay sizes are minimised;
* Stored materials will be rotated, on a first in and first out basis; and
* Hotspots will be detected and controlled by;
  + Routinely turning stored materials; and
  + Minimising external heating during hot weather by avoiding ignition hot spots / concentrated beams of sunlight or glare reflected onto stockpiles through surfaces.

## 2.7 Plant and Equipment on Site

The following items of mobile plant will be held on Site:

* 1 x Digger/Loading Shovel;
* 5 x Forklift Trucks; and
* 1 x Scissor Lift.
* 1 x Boom MEWP

The machinery will be maintained in line with AO’s maintenance procedure and the maintenance schedule recommended in the manufacturer’s manual. All plant and equipment will receive Lifting Operations and Lifting Equipment Regulations (LOLER) and Provision and Use of Work Equipment Regulations (PUWER) statutory inspections. Daily checks will be carried out on all mobile plant and any findings recorded in the Site diary. All mobile and fixed plant servicing and maintenance will be carried out as per the manufacturer’s instructions. Any defects that might harm the environment will be entered into the management system records.

All mobile plant will be fitted with fire extinguishers.

Outside of operational hours, mobile plant will be stored within the dedicated storage area located within the process building, located at a distance of over 6m from any combustible waste. Plant and equipment will be visually inspected prior to every use to ensure it is fit for purpose.

## 2.8 Training

Staff receive training in the use of fire alarm call points, use and selection of fire extinguishers, use of containment bunds, surface water valve, Site evacuation, fire safety and all relevant emergency procedures.

All staff and contractors working on Site are made aware of the contents of the FPP and the procedures that are in place in the event of a fire on Site during their induction. The staff training will be refreshed regularly, particularly in the event of non-compliance.

Certain staff members on Site are trained as Fire Marshals and a Fire Marshal will always be present on Site. The procedures for fires discovered on Site will be provided both in the Site’s IMS and on-Site notice boards. AO will regularly review the FPP or in the event of any significant changes to Site operations, to ensure that the contents are still relevant and that all staff members’ knowledge is current and up to date.

## 2.9 Security Measures

The Site is already enclosed by perimeter fencing and benefits from a Site entrance gate designed to prevent unauthorised access. The Site will be operational between 06:00 and 22:00 on weekdays with a significant amount of Site operatives present at these times. Outside of working hours or during any periods of shut down for maintenance, the Site will be monitored remotely using CCTV which will be observed by a member of staff at AO’s Halesfield Site. All doors to buildings will be locked when not in use and the factory building is protected by a monitored alarm system.

The gates and fencing will be inspected weekly to identify any weaknesses or defects. Any defects identified will be repaired with a temporary solution within 24 hours, with a permanent fix implemented within 7 days, unless a timescale is otherwise agreed with the EA.

## 2.10 Fire Sources and Prevention Measures

Table 2-4 below provides a summary of the potential causes of fire on Site and associated preventative measures and is taken from the FPP guidance.

**Table 2-4**

**Fire Sources and Preventative Measures**

|  |  |
| --- | --- |
| Cause | Preventative Measures |
| Arson and Vandalism | The Site has a number of security measures in place to limit the likelihood of arson or vandalism including:   * Perimeter fencing with a gated entrance which will be locked if appropriate; * Lockable doors on the processing building and office/welfare facilities; * CCTV coverage of all external areas ; * Monitored alarm system for the processing building; * Inspection and maintenance procedures; and * A visitor sign in system.   In the event of a breach of security at the Site, the cause will be investigated, and appropriate mitigation measures implemented. This will be recorded in the Site Diary. Records maintained will include inspections and maintenance of doors and locks, breaches of security, investigations and actions taken. |
| Self-Combustion | Effective stock management limits the likelihood of the self-combustion of materials stored on Site. As such, the Site has waste acceptance and stock management procedures which will be upheld by all employees at the Site, as detailed in Section 2.2.  Waste is stored for a maximum of 3 months, minimising the potential for hotspots. Furthermore, the stock will be regularly rotated, with the storage benefiting from a first in, first out system. Only wastes included in Table 1-6 will be accepted at the Site.  Non-waste materials that pose a risk of self-combustion will be stored as indicated in Table 2-3. |
| Plant or equipment failure | Plant and equipment are maintained in accordance with the manufacturer’s recommendations. All plant on Site is part of a computerised maintenance management system (CMMS) known as Lean RCM. Condition and preventative maintenance are based on the CMMS, which automatically highlights any faults as part of the minimum design specifications, except where it may not be possible e.g. for plant hired in an emergency.  Plant and equipment are operated in accordance with the manufacturer’s instruction manuals. Instruction manuals for plant and equipment are held either on Site or online if a hardcopy is not available from the manufacturer.  No portable heaters are to be utilised on Site. Wall mounted convection heaters are provided in the office and welfare areas.  Site Management will ensure the heater is switched off when an area is not in use. There is no heating proposed for the operational areas inside the factory building. Induction training and refresher training will be provided to staff in the safe operation of plant and equipment relevant to their role, in accordance with the IMS.  Inspection of plant and equipment will be undertaken on a daily basis to check for faults and ensure appropriate safeguards are in place. The procedure also covers general housekeeping and cleaning of plant and all equipment on Site. Storage of mobile plant is detailed in Section 2.7. In the event of a failure or suspected fault with an item of plant or piece of equipment, the operator will ensure that the equipment is shut off in a safe manner and not used until the equipment can be repaired or replaced. |
| Electrical faults (including damaged or exposed electrical cables) | All electrics on Site will fully be certified by a qualified electrician and regular safety inspections will be carried out in accordance with AO’s IMS. Records of faults and/or daily electrical maintenance will be recorded in the Site diary. |
| Naked lights | All ignition sources will be kept a minimum of 6m away from the storage of combustible and flammable wastes. No naked lights are permitted on Site. |
| Discarded Smoking materials | Smoking is not permitted on Site due to the combustible nature of materials stored on Site. Any smoking must be conducted in the dedicated smoking area, located adjacent to the main car park. |

|  |  |
| --- | --- |
| Cause | Preventative Measures |
| Hot Works | All hot works are to be undertaken under a permit to work system which includes a 60-minute fire watch by a competent person at the end of the works. No hot works are undertaken by staff unless they are trained and have the relevant permit to work.  All hot works are to be conducted in a cleared area of the Site at least 6m from any combustible wastes. A Site operative will perform a continuous fire watch during the hot work and for a minimum of 60 minutes after the work is completed. |
| Hot Exhausts | Vehicles will be turned off when not in use. Consideration will be given to the high-risk time for hot exhausts (one hour after switching off when dust can settle on hot surfaces) and wherever possible vehicles are to be given time to cool down prior to Site staff leaving Site at the end of a shift. |
| Open Burning | Burning is not permitted on Site. |
| Ignition Sources | Sources of ignition have been assessed and reduced as far as reasonably practicable – see Ref Fire Risk Assessment.  All sources of ignition are kept more than 6 metres from combustible or flammable waste in line with guidance. To ensure that sources are kept a sufficient distance apart, CCTV monitoring of the site and monitoring will check that no sources of ignition are close to the waste storage bays, good housekeeping practices will be checked to see if flammable substances are stored correctly, gas bottles are stored correctly etc. In addition, the Permit-to-Work procedure will ensure all hot work is undertaken is a safe manner. |
| Batteries | The Site does not handle, process, or store batteries. |
| Leaks and spillages | Incidental spills are safely cleaned-up, absorbed, neutralised, or otherwise by trained personnel. A spillage procedure is in place.  To protect the ground from leaks and spills during out of hours, all site mobile vehicles are stored within the main building. |
| Build-up of loose combustible waste, dust and fluff | As outlined in Section 2.4, the site will undergo daily cleaning using brooms, mobile plant and/or wash down hoses/jet wash to prevent a build-up of debris and dust on site. AO will adopt good housekeeping measures on site. |
| Reactions between incompatible materials | To ensure that incompatible materials or reactions do not take place, waste is offloaded at the Site supervised by suitably qualified Site operatives.  Only vehicles that are accompanied by the correct documentation will be accepted onto Site. Waste undergoes a visual inspection at the point of acceptance and at the point of deposition into the waste storage areas. The fuel tank building benefits from double bunding so that any leaks/spillages are contained.  Additionally, the water tank and external sludge dewatering tank will also benefit from bunding to contain any leaks or spillages. Each bund will be capable of containing at least 110% of the volume of the tank within the bund. Bunds are impermeable and resistant to stored materials. |
| Neighbouring Sites | The Site is located within an area of industrial properties. The nearest residential receptors are 510m southeast of the Site.  Employees will remain aware at all times and report activities or behaviour which could represent a fire risk from neighbouring Sites to the Site Manager. The manager will then take action as appropriate to address the risk |
| Sparks from loading buckets | Loading buckets will benefit from a rubber strip to prevent the generation of sparks where the bucket comes into concrete with hard surfaces. |
| Incompatible Wastes (Including reactions between incompatible materials) | All wastes arriving onsite will be checked in accordance with the waste acceptance procedure included within Section 2.2 to ensure no materials of unknown composition are accepted at the Site. Spillages and leakages of fuels and oils will be handled in accordance with the EMS’ Accident Management Plan. |
| Hot loads deposited at Site | No burning, reactive / reacting or visibly hot (producing steam or heat) loads are to be accepted on Site. In accordance with the Waste Acceptance Procedure included within Section 2.2, each load will be visually inspected at the Site entrance to ensure compatibility with accompanying delivery notes, therefore minimising prohibited wastes and the acceptance of hot loads.  Instructions will be given to suppliers to ensure no hot loads are accepted on Site. Should a hot load be deposited on Site, it will immediately be removed to the dedicated quarantine area and removed from Site the same day to a suitably licenced facility for disposal. |

# 3. Fire Management

## 3.1 Containing and Mitigating Fires

All waste storage will occur outside the building therefore an automatic suppression system is not required in the external storage area.

The processing building does benefit from an automatic sprinkler suppression system.

In addition, the recently installed Shedder system (at the front end of the treatment process) benefits from its own dedicated deluge system.

The local Fire Service will assume full control for the approach to suppression/extinguishing of any fire once it is in attendance at the Site.

### 3.1.1 Manual Fire Suppression

The locations of all fire extinguishers on Site are illustrated on [Drawing 005](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E005%2E1%5FDETAILED%5FSITE%26FPP%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings). Foam, water, carbon dioxide and powder extinguishers will be provided on Site. The extinguishers will be inspected annually.

Hoses will be stored on Site external to the factory building to attach to the water tank in the event of a fire. The location of the hoses and water tank are visible in [Drawing 005](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E005%2E1%5FDETAILED%5FSITE%26FPP%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings). Furthermore, the locations of nearby off-Site hydrants are illustrated on [Drawing 005](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E005%2E1%5FDETAILED%5FSITE%26FPP%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings). The hydrants can be used by the Fire Service in the event of an emergency.

The Site will not continue to accept waste if there is an active fire on Site. Waste will be diverted to a nearby suitably permitted Site and, if possible, waste producers will be notified in advance to prevent delivery vehicles arriving on Site during and immediately after a fire. The waste processing building has been constructed to the appropriate standards.

Should fire compromise the stability or integrity, the buildings and Site will be immediately evacuated.

### 3.1.2 Site Plans

Up-to-date Site plans are displayed across the Site and detail:

* Site layout;
* Waste storage arrangements; • Firefighting equipment locations (Pollution Control Equipment); and
* Personal Protection Equipment (PPE).

In addition, all procedures relating to emergency procedures on Site, including fires, are to be held within the Site office and can be easily found and are readily available.

## 3.2 Fire Drills on Site

The Emergency Response Co-Ordinator will supervise all fire drills. A fire drill will be carried out and documented no fewer than once every 6 months.

This FPP is implemented across the Site and all fire management equipment will be tested on an annual basis. If any issues are found during these fire drills, the FPP will be updated or amended accordingly, and Site operatives will be re-trained. Regular checks will be made of all escape routes and equipment to ensure they are unobstructed and in good working order.

## 3.3 Emergency Contact Details

An emergency contact sheet is included in Appendix 01. In the event of a fire the following procedure will be followed:

* The Emergency Response Co-ordinator or Deputy will locate the emergency contact list included in Appendix 01;
* In the event of a large fire, 999 will be dialled first;
* The Emergency Response Co-ordinator or Deputy will phone each of the local businesses included in Appendix 01, followed by the sewage service if appropriate to do so; and
* Finally, the EA incident hotline will be dialled once the situation is under control.

## 3.4 Site Procedures

### 3.4.1 Small Fire

A small fire or area of smouldering waste will be dealt with as follows:

* A fire or area of smouldering waste will not be dealt with in-situ, mobile plant will be utilised to pull the affected waste into the open and away from any further waste that could become a light on contact; and
* Depending on the size / nature of the fire the waste will either be:
  + Extinguished immediately6 utilising the fire extinguishers or hoses; or
  + Moved to the appropriate quarantine area and extinguished7.

Depending on the size, location and nature of the fire, the burning waste will be pulled into the dedicated fire prevention quarantine area following the procedures detailed in Section 3.7.1.

Once a small fire is dealt with the remaining area will be visually inspected immediately by Site operatives for any signs that a fire / smouldering waste still remains. The same procedure, detailed in this Section, will be implemented should this be the case.

6 Should a single item of the waste stream be alight, and the fire is well contained, then the waste will be doused via use of an extinguisher or hose as it is pulled from the waste pile. The burned / fire- damaged portion is then removed to the quarantine area and the remaining waste returned to the pile.

7 If the fire is not easily contained to a single item, then the obviously alight portion of the waste will be removed to the quarantine area

### 3.4.2 Uncontainable Small Fire or Large Fire

The following procedure is in place on Site that will be followed in the event of a small fire becoming uncontainable or in the event of a major fire onsite;

* The Site Manager and Fire Service will be contacted immediately. The local sewerage service and EA will be notified at the first opportune moment.
* Following arrival of the Fire Service, all Site staff will take instructions from the Fire Service which may include any of the following:
  + If possible, waste that is unburnt will be dampened down to prevent the fire from spreading further;
  + If possible, unburned material will be separated from the fire using heavy plant;
  + The burning area will be isolated, and attempts will be made to extinguish the fire utilising the onsite fire extinguishers if safe to do so; and
  + The Site and buildings will be evacuated.

## 3.5 Fire Waters

The Site has the benefit of impermeable surfacing throughout. Site drainage is shown on [Drainage Plan](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?newTargetListUrl=%2Fsites%2FIMS%2FIMS&viewpath=%2Fsites%2FIMS%2FIMS%2FForms%2FAllItems%2Easpx&id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da).

### 3.5.1 Storage Bays in External Yard Area

The yard area benefits from impermeable surfacing throughout, enclosed by kerbing and sloping banks to the east. This therefore will provide full containment of firewater on the Site. Additionally, the Site will benefit from a containment bund next to Bay 1 which will be capable of containing fire water within the immediate waste storage area.

The site drainage system comprises two strands: a foul drainage and surface water drainage. A penstock valve is used to contain firewater entering the foul drainage system. The surface water drainage system contains an underground retention chamber with an oil interceptor. The oil interceptor enables the removal of sediment and oil from the water. Additionally, the retention chamber provides containment for any dirty runoff and benefits from a valve which can be closed to prevent water leaving the site. This has the dual benefit of preventing contaminated water running to surface water receptors, and also ensuring firewater pools on site for reuse by the Fire Service. As in Section 2.8, Site operatives are trained in the use of the valve.

### 3.5.2 Firewater Calculations

Based upon the FPP guidance firewater calculations, it is estimated that approximately 494,942.4 litres of water would be required to put out the largest combustible stockpile on Site.8

Sources of water available onsite are:

* The on-board water supply from Fire Service vehicles; and
* Water Tank in the north-western corner of the Site of 903m3 capacity (fire hoses on site will have the necessary fittings to connect them to the water tank).

Sources of water available offsite are:

* Hydrants – the nearest is located approximately 40m east of the Site’s boundary. The Fire Service will collect and reuse firewater run off as part of normal operating procedures. The locations of water sources are shown on [Drawing 005](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E005%2E1%5FDETAILED%5FSITE%26FPP%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings).

### 3.5.3 Fire Water Containment

During a fire, it is anticipated that a maximum of 494,942.4 litres of water will run off the waste. The primary and secondary means of containment detailed below provide sufficient containment for all likely firewater arising from an incident. (In reality the fire-water to be contained will be less as a significant proportion will evaporate.)

#### Waste Storage Area Kerbing and Containment Bund (Primary)

The Site benefits from 15cm kerbing at the perimeter of the Site, with the only exception being the site entrance and exit. A containment bund has been placed between the processing building and southern kerbing to contain any runoff from the waste storage area. As a primary means of containment on Site, the kerbing and containment bund can hold 599.7 m3 9 (599,700 litres) of water. This ensures any potentially contaminated firewater generated in the waste storage area is fully contained. The containment of firewater here will enable the Fire Service to recycle it if appropriate to extinguish the fire.

Note: The Fire and Rescue Services (FRS) will be informed that there are wastes that may contain POPs on the premises and their location(s) in the event of a fire. Residues from the fire may contain POPs and will be segregated and treated following the POPs regulations. This could include firefighting water. Any firewater contained will be tested prior to removal from Site via tanker to a suitably licenced facility.

8 Based on a 410.4m3 bay being the largest combustible pile on site and it requiring 6.7 litres of water per cubic metre to extinguish. 6.7 \* 410.4 = 2,749.68 litres/min. 2,749.68 \* 180 = 494,942.4 litres/3 hours.

9 Based on 15cm kerbing and an internal area of 3,977.7m2 . 3,977.7m2 x 0.15 = 599.655m3

#### External Yard Area (Secondary)

The Site slopes slightly with the highest point being the entrance/exit on the eastern boundary. Run-off will therefore pool in the centre and west of the Site. This is further demonstrated on Drawing 004 which shows the drainage of the site running from the east to the west. Considering the kerbing and sloping, the Site can contain 2,076.852m3 10 (2,076,852 litres) of water. As a secondary means of containment, any firewater not temporarily stored within the waste storage bunding will be contained here.

## 3.6 Management after a Fire Event

After a fire event, the following procedure will be implemented depending on the severity of the fire:

1. A small and containable fire that can be safely dealt with in-house using suitably trained staff and firefighting equipment located on Site: The fire will be recorded in the Site Diary, including the causes of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented onsite will be incorporated within this FPP and the Site’s EMS as required.
2. A larger fire that requires the presence of the Fire Service: If the Site operatives have been told to evacuate or cease operations by the Fire Service, the Site will wait until told safe to re-enter and resume operations. Any closure of the Site will be followed by informing customers and the regulatory authorities. The fire will be recorded in the Site Diary and in an online incident report and will detail the causes of the fire and methods used to manage the fire. An assessment will be carried out to determine whether further mitigation measures could have prevented the fire. Any outcomes to be implemented onsite will be incorporated within this FPP and the Site’s EMS as required.

Should damage be sufficient to prevent the Site from being able to store waste, the Site will cease accepting waste from their Halesfield Site until the situation is resolved. The Site Manager will liaise with the EA to determine a plan-of-action to introduce normal operations at the Site, and the timescales involved to achieve this.

10 Based on 15cm kerbing and site area of 13,845.68m2 . 13,845.68m2 x 0.15 = 2,076.852m3

## 3.7 Fire Damaged Waste

A visual assessment will be carried out by the Site Manager to determine whether the waste can be treated on Site. Wherever possible, unburnt wastes will be separated from fire damaged piles. If waste piles have become mixed, then it is likely that the waste will be removed from Site to a suitably permitted facility.

The Site Management will determine what decontamination measures will be required to be carried out proportionately to the impact caused by the fire. The period of time taken to restore the Site or affected part of the Site to operational status will be determined by the nature and extent of the fire. If the affected area does not impact the rest of the Site’s operation, operations will re-start as and when appropriate.

After a significant incident, an assessment will be undertaken by a suitably qualified individual. Technically competent managers and/or engineers will assess the degree of damage caused by a fire and the residual risk from fire damaged waste, emissions or equipment. Burnt waste material will be kept on Site for a short period of time if required for a subsequent internal investigation. Following this, the material will be transferred off Site to a suitably licensed disposal facility.

### 3.7.1 Quarantine Area

The Site benefits from a dedicated fire management quarantine area and a non-compliant waste quarantine area. The locations of the two quarantine areas are illustrated on [Drawing 005](https://aoretaillimited.sharepoint.com/sites/IMS/IMS/Forms/AllItems.aspx?id=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings%2F09242%2E00006%2E13%2E005%2E1%5FDETAILED%5FSITE%26FPP%2Epdf&viewid=4068d1a8%2Dedcf%2D4435%2Db0c6%2D01d8813e31da&parent=%2Fsites%2FIMS%2FIMS%2F04%2E2%20%2D%20Interested%20Parties%2F01%2E%20SP11%20%2D%20Environment%20Agency%2F01%2E%20SP11%20%2D%20Environmental%20Permit%2F03%2E%20Drawings) and detailed in Table 3-1 below.

**Table 3-1**

**Quarantine Area Dimensions**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Quarantine Area | Primary Use | Length (m) | Width (m) | Height (m) | Volume (m3) |
| Fire Prevention | Dousing of burning/smouldering waste and/or separation of unburnt waste. | Irregular shape with an area of 115m2 | | 3.8 | 437 |
| Non-compliant waste | The temporary storage of non-compliant waste. | 3.66 | 1.68 | 1.22 | 7.5 |

#### Non-compliant Waste Quarantine Skip

In the event of non-compliant waste being identified within the waste load, the vehicle will be requested to remove the load off Site immediately. If the vehicle has already unloaded the waste, it will be moved to the noncompliant waste quarantine skip and removed off Site within 72 hours.

#### Fire Management Quarantine Area

The fire management quarantine area benefits from 80cm thick concrete bay walls and holds at least 50% of the largest waste storage area on Site.

The proposed placement of the quarantine area is based on the following factors:

* It allows easy access by the Fire Service;
* Proximity to water tank – the quarantine area will be located in the north-eastern area of the site close to the water tank;
* Proximity to flammable liquids – the quarantine area will be situated at least 6m from any potentially flammable liquids on Site such as diesel tanks; and
* Firewater containment – the quarantine area will be in the north-eastern area of the Site within to the primary firewater containment area therefore any firewater used in this area will be sufficiently contained.

The Site Management will instruct all Site operatives when and how the burnt/burning waste, or any hot loads delivered accidently to Site, will be moved to the quarantine area. The following procedure will be implemented on Site:

* When it is safe to do so, the waste will be moved by on Site plant to the quarantine area;
* The movement of the waste will be overseen at all times by the Site Manager to minimise any spillages and ensure the area is not overfilled;
* To limit any spillages, plant will not be overfilled when moving the waste;
* The burning/smouldering waste will be doused using the relevant fire extinguisher, a fire hose connected to the water tank, a fire hose supplied by the fire service connected to the hydrant or water pumped from the fire engine; and
* Burnt waste will be taken off Site to a suitably licensed facility within 48 hours.

All Site operatives will be trained to follow this FPP and all procedures listed in the above sections.

# 4. Conclusion

This FPP is considered to be a ‘working’ document that is reviewed and updated annually or as required should any of the following occur:

* A fire on Site;
* In response to any significant process change;
* A change or review of legislation; or
* If the Site is instructed to do so by the EA.

It is the responsibility of the Site Manager or nominated person to maintain this FPP and to ensure it is adhered to in the event of a fire on Site.